

Geographic forms of the Regent Parrot *Polytelis anthopeplus* (Lear), and their type localities

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The Australian Regent Parrot *Polytelis anthopeplus* occurs in two widely disjunct populations: one through the wheat-belt of southwestern Australia and the other in mallee and eucalypt woodlands along the central Murray River in inland southeastern Australia. The western isolate is moderately widespread and abundant (Serventy & Whittell 1976), but the more brilliantly plumaged population in the east has become reduced to such fragmented enclaves that it is now gazetted as rare and threatened (Burbidge 1985). Although Peters (1937) and Forshaw (1969) did not accept any forms, Condon (1951, 1975), Lendon (1973) and Forshaw (1978, 1981, 1989) agreed that the eastern enclave averaged brighter yellow than the western; so they distinguished them subspecifically. None of the reviews, however, were supported by morphological analyses in detail.

Here 34 adult plumaged males and 17 females of the eastern population in the Australian Museum, Sydney (AM), Australian National Wildlife Collection, CSIRO, Canberra (ANWC), Museum of Victoria, Melbourne (NMV), South Australian Museum, Adelaide (SAMA) and Western Australian Museum, Perth (WAM) have been compared with 8 males and 10 females of the western group. Eastern males are a brilliant mustard yellow over the head and ventral surface, dulling to mid olive on the mantle; western males are a more muted olivine yellow ventrally, and are deep, almost dusky-olive on the mantle, the dark cast from which washes up over the head. There is some variation in depth of tone within populations, particularly on the mantle, and in a reddish wash around the vent. One additional western male, WAM7379 from an anonymous source with unspecified locality, equalled eastern males in brightness of ventral yellow, *cf.* anecdotal field observations by Forshaw (1981). With an unworn bill (culmen from cere 20.5 mm), it may well have been a caged bird transported from eastern states; it is excluded from the table of measurements (Table 1). Differences between females parallel those between males to a lesser extent, eastern females being mid olive-yellow over the face and ventral surface, approaching western males in tone. Western females average slightly duller and more greenish olive, with an often smaller patch of citrine on the lesser wing coverts ('shoulders'). Broad sulphur edging to the inner margins of the remiges appears to reflect juvenility, but may be less marked in eastern than western populations. Overall, the contrast in colouring between the sexes is greater in eastern than western populations.

Indexed by length of wing and bill, eastern males average slightly and significantly larger than those in the west (Table 1). Comparisons in length of tail are untrustworthy because of wear. Western males also differ less from females in size (Table 1), in parallel with lessened

TABLE 1

Mean measurements (mm), with one standard deviation, of eastern and western Australian series of the Regent Parrot *Polytelis anthopeplus* in Australian museum collections, and the significance of their differences by *t*-test at the 5% level of probability. *Indicates $P < 0.05$; > 0.1 ; NS indicates $P > 0.05$ (not significant)

Population	<i>n</i>	Wing (flattened chord)	Tail	Culmen (from cere)
Eastern ♂♂	34	200.9, 5.8	223.5, 8.0	18.4, 0.9
Western ♂♂	8	194.3, 5.6	223.0, 9.1	17.1, 0.6
<i>t</i>		2.58 (*)	0.02 (NS)	2.42 (*)
Eastern ♀♀	17	195.9, 5.7	205.9, 8.3	18.4, 1.0
Western ♀♀	10	194.5, 4.5	198.0, 7.3	17.4, 0.7
<i>t</i>		0.73 (NS)	2.50 (*)	2.01 (NS)

dimorphism in their plumage. Such differentiation in both colour and size reflects allopatric divergence. Eastern and western populations have been separated from one another by alien habitat for at least 25,000 years since the onset of the last dry glacial epoch, and probably for considerably longer (*cf.* Bowler 1982, Bowler & Wasson 1983).

Three names are available for the two subspecies: *Palaeornis anthopeplus* Lear, 1831, *Palaeornis melanura* Lear, 1832 and *Polytelis anthopeplus westralis* Mathews, 1915. Both of Lear's names, based on a female and adult male respectively, were published on plates in his *Illustrations of the Family of Psittacidae, or Parrots*, 1830–1832, without description or indication of their Australian source. Since Mathews' (1912) first subspecific list of Australian birds in 1913, they have been presumed to apply to the eastern population and given the type locality of New South Wales (e.g. Peters 1937, Condon 1975). *P. a. westralis* Mathews, type locality southwest Australia, is based on the western form. Lear's (1830–2) superb figures of *Palaeornis anthopeplus* and *P. melanura*, nevertheless, also match the western form. The male (*melanura*) on plate 28 approaches it most closely, the dusky olive of its mantle washing up on to the crown and over the face. The female (*anthopeplus*) on plate 29 is dull as well, with a mid greenish wash around the neck, similar to the figure of a syntype of *Polytelis anthopeplus westralis* Mathews on plate 296 in Mathews (1916–7).

Historical circumstances are coincident. The only specimens of the eastern form taken before the publication of Lear's names were collected by Charles Sturt on his epic exploration of the Murray River in early 1830. The two skins that he preserved out of the dozen or so shot (Sturt 1834, pl. opp. p. 191) were sent directly to the University Museum at Edinburgh, Scotland, where Lear could hardly have seen them; one, a female, is still extant (Stenhouse 1930).

Southwestern Australia instead is the likely provenance of the Regent Parrots that Lear figured in 1831 and 1832. Lear drew the subjects for his folio from specimens shipped alive from colonial outposts to the menageries of the Zoological Society of London, Lord Stanley and N. A. Vigors, and as skins to the collection of the Zoological Society or London

dealers such as B. and J. Leadbeater (Hyman 1980: 20–22, Tree 1991:38). In southwestern Australia, Regent Parrots range south on the west coast to beyond the Swan River, which was settled from 1829, and west on the south coast towards King George Sound (Albany), which was garrisoned in 1826. That Lear had parrots and cockatoos available from Albany, at least, for this folio is clear from his figures of *Calyptorhynchus baudinii* Lear, and probably *Platycercus stanleyii* Vigors = *P. icterotis icterotis* (Kuhl), *Platycercus pileatus* Vigors = *Purpureicephalus spurius* (Kuhl) and *Platycercus baueri* Lear = *Barnardius zonarius semitorquatus* (Quoy and Gaimard) (Lear 1830–32). Perhaps significantly, Lear's plates of both *Calyptorhynchus baudinii* and *Palaeornis melanura* are annotated with the same English source: "in the possession of Mr Leadbeater". Some parrots and cockatoos illustrated by Lear are found in the eastern range of the Regent Parrot; but these species—*Cacatua leadbeateri leadbeateri* and *Barnardius zonarius barnardi*—extend much further east. Along with Lear's *Palaeornis rosaceus* = *Polytelis swainsonii* (Desmarest, 1826), they were probably trapped by local expeditions and colonists out from the newly established settlements along the Macquarie River, New South Wales, in the 1820s.

Unfortunately, the name-bearing types (here holotypes) of *anthoepplus* Lear and *melanura* Lear are almost certainly lost. Neither is cited as having passed to the British Museum (Natural History) by Sharpe (1906: 514–5), Salvadori (1891: 480) or Warren (1966). To avert further arbitrary or argumentative association of the names *anthoepplus* and *melanura* with the eastern form, a single neotype is designated here for both names upon the recommendation of the Taxonomic Advisory Committee of the Royal Australasian Ornithologists Union. It is WAM A7095, a female from Bolgart, c. 40 km north of Toodyay, southwestern Australia. By this action, *Palaeornis melanura* Lear becomes a junior objective synonym of *P. anthoepplus* Lear. The eastern form, in turn, lacks a name which is provided herewith:

***Polytelis anthoepplus monarchoides* subsp. nov.**

Holotype. ANWC 42432, male adult, leg. R. Schodde at Kingston, 12 km west of Barmera, South Australia, 6 November 1989.

Paratypes. AM 0.17892 male, ANWC 42433 male, ANWC 14821 female, NMV B.18436 male, SAMA B.46511 male.

Diagnosis. Males brilliant mustard yellow ventrally, washing over face and head; mantle mid, rarely dark olive. Females mid olive-yellow over face and ventral surface with reduced greenish tint, citrine patch on lesser wing coverts ('shoulders') variably large. Size large, with sexual dimorphism in wing length: male wings 190–214 (mean 201) mm, female wings 187–210 (mean 196) mm.

Etymology. *monarchoides*, from the Greek "resembling a ruler or monarch", paraphrases the English name for this elegant parrot, the largest of its genus.

Distribution. Central Murray River and fringing mallee woodlands in inland southeast Australia, east to Balranald and Swan Hill (formerly Echuca), south to Wyperfeld and Jeparit (formerly southern Wimmera

and Bordertown), west to Karoonda and Waikerie (formerly Keith, Murray Bridge and Mt Mary Plains), and north to Gluepot, Canopus, Pooncarie and Arumpo. Within these limits, distribution is patchy.

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